



Chapter 2 - Environmental Compliance Summary

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Chapter Highlights

Operations at the Idaho National Engineering and Environmental Laboratory (INEEL) are subject to numerous federal and state environmental statutes, executive orders, and U.S. Department of Energy (DOE) orders. As a requirement of many of these regulations, the status of compliance with the regulations and releases of nonpermitted hazardous materials to the environment must be documented. Overall, the INEEL met all its regulatory commitments in 2003 and programs are in place to address areas for continued improvement.

The following paragraphs highlight the accomplishments made in 2003:


Under a Federal Facility Agreement/Consent Order, signed in 1991, the INEEL was divided into ten Waste Area Groups containing 25 operable units, which are areas with similar contamination grouped within a single Record of Decision. The INEEL continues to make progress on remedial actions at operable units, as detailed in Chapter 3.

The Idaho Department of Environmental Quality conducted a Resource Conservation and Recovery Act inspection at the INEEL in August 2003. Two notices of violation were issued as a result of this inspection. The State of Idaho, Bechtel BWXT Idaho, LLC, the DOE Idaho Operations Office (DOE-ID), and British Nuclear Fuels Limited, Inc. negotiated a consent order and resolved the alleged violations.

The State of Idaho approved closure plans for the following facilities: Phase II of Tank Farm Facility Closure; TRA-630 Catch Tank; and TAN-647 Storage Unit.

The final Environmental Assessment to evaluate pre-fire planning, fire response, and post-fire restoration alternative was issued in April 2003, with a finding of no significant impact.

The Advanced Mixed Waste Treatment Facility commenced retrieval operations, meeting a Settlement Agreement milestone.



DOE-ID submitted the 2003 *INEEL National Emission Standards for Hazardous Air Pollutants-Radionuclides* report to U.S. Environmental Protection Agency, DOE Headquarters, and State of Idaho officials in June 2004, in compliance with the Clean Air Act.

2. ENVIRONMENTAL COMPLIANCE SUMMARY

This chapter reports the compliance status of the Idaho National Engineering and Environmental Laboratory (INEEL) with environmental protection requirements. Section 2.1 discusses the compliance status of the INEEL with respect to major environmental acts, agreements, and orders. Section 2.2 discusses environmental occurrences, which are nonpermitted releases that require notification of a regulatory agency outside of the U.S. Department of Energy (DOE). Section 2.3 presents a summary of environmental permits for the INEEL Site. The programs in place to attain compliance with major acts, agreements, and orders are discussed in Chapter 3.

2.1 Compliance Status

Operations at the INEEL are subject to numerous federal and state environmental statutes, executive orders, and DOE orders. These are listed in Appendix A. This section presents a brief summary of the INEEL's compliance status with those regulations. Table 2-1 shows how the discussion is organized.

DOE Order 450.1, Environmental Protection Program

DOE issued this Order in January of 2003 with the purpose of consolidating all environmental protection activities under the umbrella of the Environmental Management System and ensuring that the Environmental Management System is integrated into each Site's Integrated Safety Management System. The INEEL's Integrated Safety Management System has successfully operated for several years and already includes an environmental component. In addition, the INEEL achieved registration under the international standard ISO 14001, Environmental Management Systems, in 2001 (see Chapter 3).

DOE Order 5400.5, Radiation Protection of the Public and the Environment

This Order establishes standards and requirements for operations of DOE sites with respect to protection of members of the public and the environment against undue risk from radiation. The standards and guides provided by DOE Order 5400.5 are presented in Appendix A. Concentrations of radionuclides measured by the INEEL environmental programs in 2003 were well below concentration guides established by this Order (see Chapters 4, 5, and 6). Potential doses to members of the public in the vicinity of the INEEL were also estimated to be well below the dose limits established by this order (see Chapter 8).

Table 2-1. Environmental compliance status.


Activity	Governing Statute or Order
Radiation Protection	DOE Order 450.1, "Environmental Protection Program" DOE Order 5400.5, "Radiation Protection of the Public and the Environment"
Environmental Remediation and Protection	Comprehensive Environmental Response, Compensation, and Liability Act Emergency Planning and Community Right-to-Know Act National Environmental Policy Act Endangered Species Act Executive Order 11988 – Floodplain Management Executive Order 11990 – Protection of Wetlands
Waste Management	Resource Conservation and Recovery Act Federal Facility Compliance Act Toxic Substances Control Act DOE Order 435.1, "Radioactive Waste Management" State of Idaho Wastewater Land Application Permits Idaho Settlement Agreement
Air Quality and Protection	Clean Air Act
Water Quality and Protection	Clean Water Act Safe Drinking Water Act
Cultural Resources	National Historic Preservation Act Native American Graves Protection and Repatriation Act

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides the process to assess and remediate areas contaminated by the release of chemically hazardous and/or radioactive substances. Nuclear research and other operations at the INEEL left behind contaminants that pose a potential risk to human health and the environment. The INEEL was placed on the National Priorities List under CERCLA on November 29, 1989. The DOE Idaho Operations Office (DOE-ID), the State of Idaho, and the U.S. Environmental Protection Agency (EPA) Region 10 signed the Federal Facility Agreement and Consent Order (FFA/CO) in December 1991. The Management and Operating (M&O) contractor in accordance with the FFA/CO is conducting environmental restoration activities at the INEEL.

The INEEL is divided into ten Waste Area Groups (WAGs) conducting environmental investigations as a result of the FFA/CO. Field investigations are used to evaluate potential release sites within each WAG when existing data are insufficient to determine the extent and nature of contamination. This information is presented to the public in a Proposed Plan. After each investigation is completed, a determination is made whether a no further action listing is possible or if it is appropriate to proceed with an interim cleanup action or further investigation using a remedial investigation/feasibility study (RI/FS). Results from the RI/FS form the basis for assessment of risks and alternative cleanup actions. After reviewing public comments, DOE-





ID, EPA, and the state reach a final decision, which is documented in a Record of Decision. Cleanup activities then can be designed, implemented, and completed. Specific environmental restoration activities are discussed in Chapter 3.

Natural Resource Trusteeship and Natural Resources Damage Assessment - Executive Order 12580, Section 2(d), appoints the Secretary of Energy as the primary Federal Natural Resource Trustee for natural resources located on, over, and under land administered by DOE. Natural resource trustees act on behalf of the public when natural resources may be injured, destroyed, lost, or threatened as a result of the release of hazardous substances. In the case of the INEEL, other natural resource trustees with jurisdiction over trust resources are the State of Idaho and U.S. Department of Interior (Bureau of Land Management and the U.S. Fish and Wildlife Service).

Past releases of hazardous substances resulted in the INEEL's placement on the National Priorities List. These same releases created the potential for injury to natural resources. DOE is liable under CERCLA for damages to natural resources resulting from releases of hazardous substances to the environment.

Although the ecological risk assessment is a separate effort from the Natural Resources Damage Assessment, it is anticipated that the ecological assessment performed for CERCLA remedial actions can be used to help resolve natural resource issues. Ecological risk assessments at the INEEL have been conducted using the established guidance manual for conducting screening level ecological risk assessments (Van Horn et al. 1995).

Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) provides the public with information about hazardous chemicals at a facility (such as the INEEL) and establishes emergency planning and notification procedures to protect the public from chemical releases. EPCRA also contains requirements for periodic reporting on hazardous chemicals stored and/or used at a facility. Executive Order 13148, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," requires all federal facilities to comply with the provisions of EPCRA.

311 Report - EPCRA Section 311 reports were submitted quarterly for those chemicals that met the threshold planning quantity. These reports were sent to local emergency planning committees, the State Emergency Response Commission, and to local fire departments for each quarter in calendar year 2003. These quarterly reports satisfied the 90-day notice requirement for new chemicals brought onsite.

312 Report - Local and state planning and response agencies received the Emergency and Hazardous Chemical Inventory (Tier II) Report for 2003 by March 1, 2004. This report identified the types, quantities, and locations of hazardous and extremely hazardous chemicals stored at INEEL facilities that exceeded:

- ♦ 10,000 pounds (for Occupational Safety and Health Act hazardous chemicals);
- ♦ 500 pounds (for Extremely Hazardous Substances as defined in Title 40 Code of Federal Regulations (CFR), Part 355 [40 CFR 355]); or the Threshold Planning Quantity (TPQ), whichever is less.

313 Report - The Toxic Chemical Release Inventory Report was transmitted to the EPA and the State of Idaho by July 1, 2004. The report identifies quantities of 313-listed toxic chemicals available on the INEEL that exceeded their TPQ. Once the TPQ is exceeded (for manufacturing, processing, or otherwise used), an EPA 313 Form R report must be completed for each specific chemical. These reports describe how the chemical is released to the environment. Releases under EPCRA reporting include transfers to offsite waste storage and treatment, air emissions, recycling, and other activities. Eight reports were prepared at the INEEL during 2003 for toluene, ethyl benzene, lead, nitric acid, chromium, naphthalene, propylene, and polyaromatic cyclic compounds. The 313 reports vary year-to-year depending upon the chemical processes at the Site.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires federal agencies to consider and analyze potential environmental impacts of proposed actions and explore appropriate alternatives to mitigate those impacts, including a "no action" alternative. Agencies are required to inform the public of the proposed actions, impacts, and alternatives and consider public feedback in selecting an alternative. DOE implements NEPA according to procedures in 10 CFR 1021 and assigns authorities and responsibilities according to DOE Order 451.1B, "National Environmental Policy Act Compliance Program." Processes specific to DOE-ID are set forth in its NEPA Planning and Compliance Program Manual (DOE-ID 2003). The DOE-ID NEPA Compliance Officer and NEPA Planning Board implement the process.


The DOE-ID issued the Annual NEPA Planning Summary in January 2003. This summary is a requirement of DOE Order 451.1B, and it is prepared to inform the public and other DOE elements of:

- ♦ The status of ongoing NEPA compliance activities;
- ♦ Environmental assessments (EAs) expected to be prepared in the next 12 months;
- ♦ Environmental impact statements (EISs) expected to be prepared in the next 24 months; and
- ♦ The planned cost and schedule for completion of each NEPA review identified.

Ongoing NEPA reviews of INEEL projects are described below.

Idaho High-Level Waste and Facilities Disposition Environmental Impact Statement - This EIS evaluates potential environmental impacts of various alternatives for treating and managing high-level radioactive waste and related radioactive wastes and facilities at the Idaho Nuclear Technology and Engineering Center (INTEC). DOE received and considered agency and





public comments on a draft EIS. In response to those comments and updated information, DOE incorporated changes into the final EIS. The final EIS was issued in the fall of 2002.

In the final EIS, the State of Idaho (a cooperating agency) and DOE identified separate preferred alternatives for waste treatment but identified the same preferred alternative for facilities disposition. The state identified vitrification as its preferred waste treatment alternative, while DOE's preferred alternative is to select from among the options and technologies or one represented by those analyzed in the EIS. The selection would be based on performance factors such as demonstration-scale test data, technical maturity, cost and schedule, ability to meet compliance dates, and public input. A phased decision-making process will be used to implement the proposed action and its preferred alternative. The technology selection phase will focus on four technologies analyzed in the EIS for implementation: calcination, steam reforming, cesium ion extraction, and evaporation to dryness.

Work on the record of decision (ROD) for the EIS is currently on hold pending resolution of legal uncertainties concerning classification of Sodium Bearing Waste and award of the INEEL cleanup contract. Upon resolution of the legal uncertainties and contract transition, DOE will establish a target for ROD issuance.

Wildland Fire Management Plan Environmental Assessment - In January 2001, the DOE-ID manager signed a determination to prepare an EA to evaluate pre-fire planning, fire response, and post-fire restoration alternatives. Actions to be analyzed include firebreak construction and maintenance, dust suppression, habitat rehabilitation, and impacts on cultural resources. DOE issued the final EA and finding of no significant impact in April 2003.

Nuclear Regulatory Commission NEPA Review - In addition to anticipated DOE actions at the INEEL that warrant NEPA review, the Nuclear Regulatory Commission (NRC) has separate NEPA authority over NRC-licensed activities forming a part of the INEEL mission. These activities currently include the Three Mile Island Unit 2 (TMI-2) Independent Spent Fuel Storage Installation (ISFSI) licensed under materials license SNM-2508 (located on the INTEC site) and the Fort St. Vrain ISFSI licensed under materials license SNM-2504 (located near Platteville, Colorado). NRC evaluates changes in or exemptions from license conditions/regulations under NEPA. NEPA reviews/actions are anticipated to occur (though infrequently) in the future as NRC regulatory requirements evolve.

In addition, Foster Wheeler Environmental Corporation submitted a license application (Docket #72-25) to the NRC on November 19, 2001, for a spent fuel storage facility to be constructed on the INEEL. The facility will be owned and operated by Foster Wheeler under a privatization contract with NE-ID. Issuance of the license by NRC to Foster Wheeler will be supported by the NRC Final EIS to be issued in late-2004. Issuance of the license (planned in 2004) constitutes the equivalent of a DOE ROD.

Endangered Species Act

The Endangered Species Act provides a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, provides a program for the

conservation of such endangered species and threatened species, and takes such steps as may be appropriate to achieve the purposes of the international treaties and conventions on threatened and endangered species. It requires that all federal departments and agencies shall seek to conserve endangered species and threatened species and shall use their authorities in furtherance of the purposes of this act.

The Environmental Surveillance, Education and Research Program conducts ecological research, field surveys, and NEPA evaluations regarding ecological resources on the INEEL. Particular emphasis is given to threatened and endangered species and species of special concern identified by the U.S. Fish and Wildlife Service and Idaho Fish and Game Department.

Two federally protected species may occasionally spend time on the INEEL: the threatened Bald eagle (*Haliaeetus leucocephalus*) and the Gray wolf (*Canis lupus*). Gray wolves found in the geographical region that includes the INEEL are identified as an experimental/nonessential population and treated as a threatened species. Bald eagles occasionally winter on part of the INEEL, and there have been unsubstantiated sightings of Gray wolves. Research and monitoring continued on several species of special biological, economic, and social concern, including Townsend's big-eared bat (*Corynorhinus townsendii*), sage grouse (*Centrocercus urophasianus*), elk (*Cervus elaphus*), and pronghorn antelope (*Antilocapra americana*).

Executive Order 11988 - Floodplain Management

Executive Order 11988 - Floodplain Management requires each federal agency to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. It is the intent of this Executive Order that federal agencies implement floodplain requirements through existing procedures such as those established to implement NEPA. The Code of Federal Regulations (10 CFR 1022) contains DOE policy and floodplain environmental review and assessment requirements through the applicable NEPA procedures (10 CFR 1022). In those instances where impacts of actions in floodplains are not significant enough to require the preparation of an EIS under NEPA, alternative floodplain evaluation requirements are established through the INEEL environmental checklist process.

For the Big Lost River, DOE-ID has directed that all proposed actions be reviewed to identify their location relative to the elevation of the 100-year flood indicated in *Flood Routing Analysis for a Failure of Mackay Dam* for purposes of the NEPA compliance (Koslow, K.N. and D.H. VanHaaften 1986). This analysis involved a 100-year flood in conjunction with the Mackay Dam failure. This direction is considered to be interim and remains in effect until DOE-ID issues a final determination of the 100- and 500-year Big Lost River flood elevations. Projects to delineate the Big Lost River 100-year through 10,000-year floodplains using geomorphological models and hydrologic analysis to characterize and estimate the frequency and magnitude of Big Lost River floods on the INEEL have been conducted. The hydrologic analysis is published in *Estimating the Magnitude of the 100-Year Peak Flow in the Big Lost River at the Idaho National Engineering and Environmental Laboratory, Idaho* (Hortness, J.E and J.P. Rousseau 2003). A flood hazard report based on the geomorphological models was drafted and will undergo peer





review in 2004. Evaluations of the determinations are ongoing and they will be presented to the DOE-ID Natural Phenomenon Hazards Committee upon completion.

For facilities at Test Area North (TAN), the 100-year floodplain has been delineated in a USGS report (USGS 1997).

Executive Order 11990 - Protection of Wetlands

Executive Order 11990 - Protection of Wetlands requires each federal agency to issue or amend existing regulations and procedures to ensure wetlands are protected in decision-making. It is the intent of this executive order that federal agencies implement wetland requirements through existing procedures such as those established to implement NEPA. The 10 CFR 1022 statute contains DOE policy and wetland environmental review and assessment requirements through the applicable NEPA procedures. In those instances where impacts of actions in wetlands are not significant enough to require the preparation of an EIS under NEPA, alternative wetland evaluation requirements are established through the INEEL environmental checklist process. Activities in wetlands considered waters of the United States or adjacent to waters of the United States may also be subject to the jurisdiction of Section 404 and 402 of the Clean Water Act.

The only area of the INEEL identified as potentially jurisdictional wetlands is the Big Lost River Sinks. The U.S. Fish and Wildlife Service National Wetlands Inventory map is used to identify potential jurisdictional wetlands and nonregulated sites with ecological, environmental, and future development significance. In 2003, no actions took place or had an impact on potentially jurisdictional wetlands on the Site, and, to date, no future actions are planned that would impact wetlands. However, private parties do conduct cattle grazing in the Big Lost River Sinks area under Bureau of Land Management permits.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) established regulatory standards for generation, transportation, storage, treatment, and disposal of hazardous waste. The Idaho Department of Environmental Quality (DEQ) is authorized by EPA to regulate hazardous waste and the hazardous component of mixed waste at the INEEL. Mixed waste contains both radioactive and hazardous materials. The Atomic Energy Act, as administered through DOE orders, regulates radioactive wastes and the radioactive part of mixed wastes.

DEQ has issued one RCRA Part A permit for the INEEL and seven Part B permits. Five additional Part B permits are pending. DOE, Bechtel BWXT Idaho, LLC (BBWI), British Nuclear Fuels Limited, Inc. (BNFL), and Idaho DEQ meet quarterly to discuss RCRA-related issues. Summaries of the meetings can be accessed at <http://cleanup.inel.gov/publicdocuments/>.

Notices of Violation - Idaho DEQ conducted an inspection of INEEL in August 2003, resulting in issuance of two notices of violation (NOV). One NOV addresses alleged violations related to facilities operated by the M&O contractor and the other addresses alleged violations at the Advanced Mixed Waste Treatment Project operated by BNFL, Inc. Most of the violations are

failures to correct in a timely manner deficiencies noted in routine operator inspection logs and reports. The state, BBWI, DOE-ID, and BNFL, Inc. negotiated a consent order and resolved the alleged violations.

RCRA Closure Plans - The State of Idaho approved closure plans for the following facilities in 2003:

- ♦ Phase II of Tank Farm Facility Closure
- ♦ TRA-630 Catch Tank
- ♦ TAN-647 Storage Unit.

RCRA Reports - As required by the State of Idaho, INEEL submitted the Idaho Hazardous Waste Generator Annual Report for 2003. The report contains information on waste generation, treatment, recycling, and disposal activities at INEEL facilities.

DOE-ID submitted the INEEL 2003 Affirmative Procurement Report to the EPA, as required by Section 6002 of RCRA and Executive Order 13101. This report provides information on the INEEL's procurement of products with recycled content.

The INEEL RCRA permit for the Hazardous Waste Storage Facility at the Central Facilities Area and some areas at Argonne National Laboratory-West requires submittal of an annual certification to Idaho DEQ that the INEEL has a waste minimization program in place to reduce the volume and toxicity of hazardous waste. The certification was submitted by July 1, 2003.

Federal Facility Compliance Act

The Federal Facility Compliance Act requires the preparation of site treatment plans for the treatment of mixed wastes stored or generated at DOE facilities. Mixed waste contains both hazardous and radioactive components. The INEEL Proposed Site Treatment Plan was submitted to the State of Idaho and EPA on March 31, 1995. This plan outlined DOE-ID's proposed treatment strategy for INEEL mixed waste streams, called the "backlog," and provided a preliminary analysis of potential offsite mixed low-level waste treatment capabilities.


The INEEL Proposed Site Treatment Plan formed the basis for negotiations between the State of Idaho and DOE-ID on the consent order for mixed waste treatment at the INEEL. The Federal Facility Compliance Act Consent Order and Site Treatment Plan were finalized and signed by the State of Idaho on November 1, 1995.

A status of Site Treatment Plan milestones for 2003 is provided in Chapter 3.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA), which is administered by EPA, requires regulation of production, use, or disposal of chemicals. TSCA supplements sections of the Clean Air Act,





the Clean Water Act, and the Occupational Safety and Health Act. Because the INEEL does not produce chemicals, compliance with TSCA at the INEEL is primarily directed toward use and management of certain chemicals, particularly PCBs.

DOE Order 435.1, Radioactive Waste Management

DOE Order 435.1, "Radioactive Waste Management," was issued to ensure that all DOE radioactive waste is managed in a manner that protects the environment and worker and public safety and health. This Order, effective July 1, 1999, replaces DOE Order 5820.2A, "Radioactive Waste Management," and includes the requirements that DOE facilities and operations must meet in managing radioactive waste. INEEL activities related to this Order are discussed in Chapters 3, 4, 5, and 7.

State of Idaho Wastewater Land Application Permits

DOE-ID has applied for State of Idaho Wastewater Land Application Permits (WLAP) for all existing land application facilities. Renewal permits have been submitted for the Central Facilities Area Sewage Treatment Plant, INTEC Sewage Treatment Plant, and Test Area North/Technical Support Facility Sewage Treatment Plant. Until the renewal permits are finalized, Idaho DEQ has authorized continued use of these facilities under the terms and conditions of the original permits.

Idaho DEQ issued a WLAP permit for the new INTEC percolation ponds for disposal of service wastewater in 2001. Idaho DEQ is reviewing permit applications for the Process Ponds at Test Area North, the Test Reactor Area Cold Waste Ponds, the Naval Reactors Facility Industrial Waste Ditch, and the Argonne National Laboratory-West industrial and sanitary waste ponds.

Idaho Settlement Agreement

On October 16, 1995, DOE, the U.S. Navy, and the State of Idaho entered into an agreement that guides management of spent nuclear fuel and radioactive waste at the INEEL. The Agreement makes Idaho the only state with a federal court-ordered agreement limiting shipments of DOE and Naval spent nuclear fuel into the state and setting milestones for shipments of spent nuclear fuel and radioactive waste out of the state. The Settlement Agreement milestones scheduled for 2003 were met as follows:

- ♦ Commence operation of the Advanced Mixed Waste Treatment Facility - the milestone was due on 3/31/03 and retrieval operations started on 3/27/03.
- ♦ Begin loading spent fuel into dry storage - the milestone was due on 7/1/03 and loading started on 7/10/97.

As part of the Settlement Agreement, the State of Idaho received \$30 million from DOE for economic development in eastern Idaho. Idaho awarded grants to the Regional Development Alliance and state universities and colleges to reduce economic dependence on the INEEL. These awards have created more than 2600 jobs.

Clean Air Act

The Clean Air Act is the law that forms the basis for the national air pollution control effort. Basic elements of the act include national ambient air quality standards for major air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is the federal regulatory agency of authority, but states may administer and enforce provisions of the act by obtaining EPA approval of a state implementation plan. Idaho has been delegated such authority.

The Idaho air quality program is primarily administered through the permitting process. Potential sources of air pollutants are evaluated against regulatory criteria to determine if the source is specifically exempt from permitting requirements and if the source's emissions are significant or insignificant. If emissions are determined to be significant, several actions may occur:

Permitting determinations demonstrate that the project/process either is below emission thresholds or listed as exempted source categories in State of Idaho regulations allowing self-exemption;

Submittal of an application for a Permit to Construct (PTC). If emissions are deemed major under Prevention of Significant Deterioration (PSD) regulations, then a PSD analysis, as described in the regulations, must be completed. If not deemed significant per PSD regulations, an application for only a PTC without the additional modeling and analyses is needed. All PTCs are applied for using the State of Idaho air regulations and guidelines.

Permitted sources of air pollutants at the INEEL are listed in Table 2-2.

Title V Operating Permit - Title V of the 1990 Clean Air Act Amendments required the EPA to develop a federally enforceable operating permit program for air pollution sources to be administered by state and/or local air pollution agencies. The EPA promulgated regulations in July 1992, that defined the requirements for state programs. Idaho has promulgated regulations and EPA has given interim approval of the Idaho Title V Operating Permit program.

The INEEL submitted the first Title V Air Operating Permit Application to the Idaho DEQ in 1995. An updated application was submitted to the DEQ in March 2001. The application included ten volumes: one for each of the nine operating areas at the INEEL and a sitewide volume that contains information and standards applicable to all areas. Idaho DEQ issued a draft permit that will undergo DOE-ID and public comment before issuing a final permit.

National Emission Standards for Hazardous Air Pollutants - DOE-ID submitted the *2003 INEEL National Emission Standards for Hazardous Air Pollutants-Radionuclides* report to EPA, DOE Headquarters, and State of Idaho officials on June 4. This statute requires the use of the CAP-88 computer model to calculate the hypothetical maximum individual effective dose



Table 2-2. Permit summary for the INEEL (2003).

Media/Permit Type	Issuing Agency	Active	Pending
Air			
Permit to Construct	State of Idaho	17	0
NESHAPs (Subpart H) ^a	EPA Region 10	1	0
Operating Permit	State of Idaho	0	1
Groundwater			
Injection Well	State of Idaho	8	0
Well Construction	State of Idaho	1	0
Surface Water			
Wastewater Land Application Permit	State of Idaho	5	2
404 Permit	Corps of Engineers	1	0
Industrial Waste Acceptance	City of Idaho Falls	15	0
RCRA			
Part A	State of Idaho	1	0
Part B ^b	State of Idaho	7 ^b	1 ^b

a. NESHAPs = National Emissions Standards for Hazardous Air Pollutants (40 CFR 61, Subpart H, National Emissions Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities).

b. Part B permit is a single permit comprised of several volumes.

equivalent to a member of the public resulting from INEEL airborne radionuclide emissions. The 2003 calculations for this code are discussed further in Chapter 8, "Dose to the Public and Biota."

Clean Water Act

The Clean Water Act (CWA), passed in 1972, established goals to control pollutants discharged to U.S. surface waters. Among the main elements of the CWA are effluent limitations, set by the EPA, for specific industry categories and water quality standards set by states. The CWA also provided for the National Pollutant Discharge Elimination System (NPDES) permit program, requiring permits for discharges from a point source into surface waters.

The INEEL complies with four CWA permits through the implementation of procedures, policies, and best management practices. The four permits are:

- ♦ Section 404 Permit for dredge and fill activities at Spreading Area B located southwest of the Radioactive Waste Management Complex (RWMC) requires elimination of pollutant discharges and reclamation in the area;
- ♦ Discharges from Idaho Falls facilities to the City of Idaho Falls publicly owned treatment works;

- ♦ NPDES General Permit for Storm Water Discharges from Industrial Activities provides protective requirements for facilities located within the INEEL storm water corridor (63 FR 189); and
- ♦ NPDES General Permit for Storm Water Discharges from Construction Activities provides protective requirements for construction activities located within the INEEL storm water corridor (63 FR 31).

Clean Water Act Section 404 Permits - In October 1994, the U.S. Army Corps of Engineers granted a ten-year Section 404 permit that allows DOE-ID to dispose of material associated with the excavation of soil in Spreading Area B to the surrounding spreading area. This area is located southwest of the RWMC. Fill removal activities have since ceased in this area.

National Pollutant Discharge Elimination System Permits - The City of Idaho Falls is authorized by the NPDES permit program to set pretreatment standards for nondomestic discharges to publicly owned treatment works. This program is set out in the Municipal Code of the City of Idaho Falls regulations in Chapter 1, Section 8. Industrial Wastewater Acceptance Forms are obtained for facilities that discharge process wastewater through the City of Idaho Falls sewer system. Twelve Idaho Falls facilities have associated Industrial Wastewater Acceptance Forms for discharges to the city sewer system.


The Industrial Wastewater Acceptance Forms for these facilities contain special conditions and compliance schedules, prohibited discharge standards, reporting requirements, monitoring requirements, and effluent concentration limits for specific parameters. All discharges from INEEL Idaho Falls facilities in 2003 were within compliance levels established on the acceptance forms.

Storm Water Discharge Permits for Industrial Activity - Revised requirements for the NPDES general permit for the discharge of storm water from industrial activities became effective in 2000. The INEEL met the requirements to continue operations under this general permit. A modified NPDES Storm Water Multi-Sector General Permit for industrial activities was also published in 2000. The original *INEEL Storm Water Pollution Prevention Plan for Industrial Activities* was implemented in 1993. The most recent revision was completed in January 2001 (DOE-ID 2001). This plan provides for baseline and tailored controls and measures to prevent pollution of storm water from industrial activities at the INEEL. The storm water pollution prevention plan team conducts annual evaluations to determine compliance with the plan. The Environmental Monitoring Unit of the M&O contractor monitors storm water in accordance with the permit requirements. Chapter 5, Section 5.5 provides results from this monitoring in 2003.

The National Oceanic and Atmospheric Administration Air Resources Laboratory-Field Research Division provides identification and notification of storm events. Storm water pollution prevention training is provided to INEEL personnel in accordance with the permit requirements.

The EPA issued a letter in October 2003 stating that they determined that INTEC, RWMC, and Test Area North (TAN) do not have a reasonable potential to discharge storm water to waters





of the United States. In December 2003, DOE-ID directed the M&O contractor to cease storm water activities at those locations and complete a technical analysis to determine if other locations at the INEEL also do not have a reasonable potential to discharge. The technical analysis is expected to be completed in 2004.

Storm Water Discharge Permits for Construction Activity - INEEL's General Permit for Storm Water Discharges from Construction Sites was issued in June 1993. The permit has been renewed twice since issuance. The *INEEL Storm Water Pollution Prevention Plan for Construction Activities* was most recently revised in 1998 (DOE-ID 1998). The plan provides for measures and controls to prevent pollution of storm water from construction activities at the INEEL. Worksheets are completed for construction projects and are appended to the plan. Inspections of construction sites are performed in accordance with permit requirements.

The regulatory basis for storm water discharge from construction sites is the same as for industrial activities; therefore, the M&O contractor was also directed to cease storm water activities associated with construction at INTEC, RWMC, and TAN in the December 2003 letter. Additional areas may be included based on the results of the technical analysis.

Spill Prevention, Control, and Countermeasure Plans - For most of 2003, TAN, INTEC, and RWMC required Spill Prevention, Control, and Countermeasure (SPCC) Plans. These INEEL facilities were evaluated in 2001 in accordance with 40 CFR 112. As a result of this evaluation, the current plans were found to inadequately address the current requirements. In 2003, the plans were updated to address the deficiencies. However, as with storm water regulations, the basis for SPCC regulations is the potential to discharge pollutants into waters of the United States, so the December 2003 letter directed the M&O contractor to cease application of SPCC regulation at the locations specified in the EPA letter. This results in SPCC no longer being applicable at the INEEL.

Safe Drinking Water Act

The Safe Drinking Water Act was reauthorized on August 6, 1996. It establishes primary standards for water delivered by systems supplying drinking water to 15 or more connections or 25 individuals for at least 60 days per year. The INEEL drinking water supplies meet these criteria for public water systems and are classified as either nontransient noncommunity or transient noncommunity systems. The INEEL operates 12 active public water systems, two of which serve the Naval Reactors Facility and Argonne National Laboratory-West. All INEEL facilities performed sampling of drinking water as required by the state and EPA. Chapter 5 contains details on drinking water monitoring results.

National Historic Preservation Act

Preservation of historic properties on lands managed by DOE is mandated under Section 106 of the National Historic Preservation Act and amendments. The act requires that for any federal project that may have an adverse effect on historic property, the agency in charge of the project must take actions to mitigate those adverse effects. This is usually done through an agreement with the State Historic Preservation Office.

DOE-ID and the Idaho State Historic Preservation Office (SHPO) implemented three memoranda of agreement in 2003 to deactivate, decontaminate, and decommission (D&D&D) multiple structures at the TAN and Power Burst Facility. Most of these structures were demolished in 2003; the remainder will be demolished in 2004. Demolition of these structures and plans to accelerate D&D&D of many other structures have necessitated development of an integrated approach. Over the next several years, DOE-ID plans to inactivate approximately 50 percent of the INEEL buildings owned by the Office of Environmental Management through consolidation of personnel and functions. INEEL developed the Historic Architectural Properties Management Plan to provide a comprehensive, cost-effective, and time saving approach to manage facility inactivation and achieve compliance with the National Historic Preservation Act while preserving important elements of INEEL's past for future generations. The INEEL Historic Architectural Properties Management Plan is incorporated as Appendix D in the INEEL Cultural Resource Management Plan (CRMP). A Programmatic Agreement with the SHPO formally implements the CRMP.

Native American Graves Protection and Repatriation Act

The INEEL is located on the aboriginal territory of the Shoshone and Bannock people. The Shoshone-Bannock Tribes are major stakeholders in INEEL activities. They are particularly concerned with how the remains of their ancestors and culture are treated by DOE-ID and its contractors. The Native American Graves Protection and Repatriation Act provides for the protection of Native American remains and the repatriation of human remains and associated burial objects. Repatriation refers to the formal return of human remains and cultural objects to the Tribes with whom they are culturally affiliated.

2.2 Environmental Occurrences

In 2003, approximately 3028 L (800 gal) of demineralized rinse water were released to the soil at INTEC. The release occurred during the final water flush for the transfer line encasements to the WM-184 tank containment vault. Because the rinse water came in contact with the encasements and vault, it carries RCRA hazardous waste codes F001, F002, F005, and U134. This release was reported to external agencies as required. Release notifications are conducted in accordance with DOE, EPA, and State of Idaho requirements.

2.3 Permits

Table 2-2 summarizes permits applied for, and granted to, the INEEL through year-end 2003.





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